

burst, but heavy local rains were reported at surrounding stations.

In this connection I wish to advise you that the streams of this immediate vicinity are now in an abnormal state in consequence of the heavy rain which occurred here on August 12. From what I have seen of these streams I am confident that it will be two or three years before the normal (animal) forms become restored. The downpour of rain was greater than had been known here before in 20 or 30 years, and the beds of the streams were completely scoured of all loose material and now consists simply of round boulder rocks. Millions of forms, both large and small, must have been destroyed at that time. On the 26th of September, while taking a day's leave of absence, I went into the headwaters of one of the largest creeks near here for a day's outing and was completely astonished at the torn up condition of the mountain sides. I had never before witnessed the work of a so-called cloud-burst, but after that day's observation I came to the conclusion that if the Weather Bureau had an adequate conception of the destruction in this vicinity, in that rain, they would probably send a man out here to look over the ground and make a report upon it.

At the point where the cloud-burst occurred the ground was torn up a width of 15 to 30 feet and from 100 to 300 yards in length up and down the mountain side. At the bottom of the mountain slope there were evidences of a violent rush of water, mud, and hundreds of tons of loose rock, stumps, and fallen timber. On Rock Creek, and especially on Martins Creek, the disaster wrought by the storm was phenomenal and something beyond my imagination until I had witnessed it myself. The scars made on the mountain sides can be seen several miles distant.

#### THE SEISMOGRAPH AT THE OBSERVATORY AT CARSON CITY, NEV.

By C. W. FRIEND, Director of the Observatory.

The seismograph stands on a solid foundation that is about even with the surface of the ground. It is of the pattern known as the duplex-pendulum seismograph. A massive bob is hung by three parallel wires from the top of the three-cornered box, and is reduced to nearly neutral equilibrium by being coupled by a ball-and-tube joint to the bob of an inverted pendulum below it. The two form a system which can be made as nearly astatic as is desirable, and so furnish a suitable steady-point for showing the horizontal component of earthquake movement in any azimuth. The motion is magnified (in the observatory seismograph about four and a half times), and recorded by a vertical lever geared to the upper bob by a ball-and-tube joint, supported on gimbals from a bracket fixed to the box, and furnished with a jointed index, which writes on a fixed plate of smoked glass.

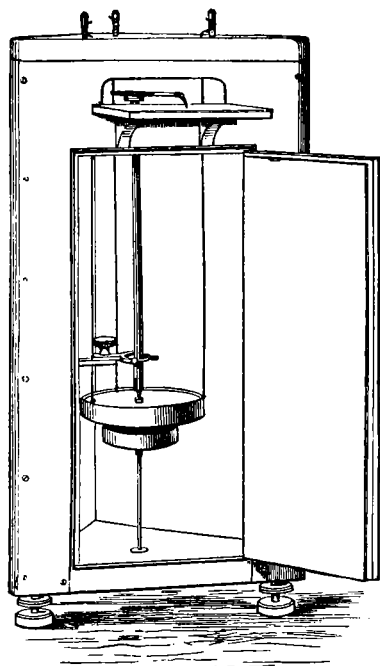


FIG. 1.—Duplex-pendulum seismograph for horizontal motion.

#### MEXICAN CLIMATOLOGICAL DATA.

Through the kind cooperation of Señor Manuel E. Pastrana, Director of the Central Meteorologic-Magnetic Observatory, the monthly summaries of Mexican data are now communicated in manuscript, in advance of their publication in the Boletín Mensual. An abstract, translated into English measures, is here given, in continuation of the similar tables published in the MONTHLY WEATHER REVIEW since 1896. The barometric means have not been reduced to standard gravity, but this correction will be given at some future date when the pressures are published on our Chart IV.

Mexican data for June, 1900.

Stations.	Altitude.	Mean barometer.	Temperature.			Relative humidity.	Precipitation.	Prevailing direction.	
			Max.	Min.	Mean.			Wind.	Cloud.
	Feet.	Inch.	° F.	° F.	° F.	%	Inch.		
Durango (Seminario)	6,243	24.03	99.5	48.2	74.5	43	0.67	ws.w.	sw.
Leon (Guanajuato)...	5,934	24.27	92.5	56.5	74.5	47	1.51	ne.	ne.
Mexico (Obs. Cent.)...	7,472	23.05	84.2	51.8	66.6	50	1.20	n.	ne.
Morelia (Seminario)...	6,401	23.96	87.4	56.5	71.1	68	5.27	s.	ene.
Puebla (Col. Cat.)...	7,112	23.36	86.5	50.5	69.4	59	4.38	ene.	ne.
Puebla (Col. d. E.)...	2,169	23.33	86.9	51.1	68.4	58	3.78	ene.	ne.
Real del Monte...	9,005	21.63	74.1	39.9	57.0	.....	4.31	n.	.....
Saltillo (Col. S. Juan)	5,399	24.75	91.6	60.6	76.1	53	0.48	n.	w.
San Isidro (Hac. de Guanajuato).....	.....	.....	85.1	69.8	.....	.....	3.76	ne.	.....
San José del Cavo (B. C.).....	.....	.....	90.0	77.0	83.8	.....	.....	s.	n.
Silao.....	6,063	24.22	90.1	62.6	75.4	50	3.28	se.	ese.
Queretaro.....	6,070	24.18	93.2	56.7	72.9	46	1.30	e.	.....

#### RECENT PAPERS BEARING ON METEOROLOGY.

W. F. R. PHILLIPS, in charge of Library, etc.

The subjoined list of titles has been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau:

- Comptes Rendus. Paris. Tome 130.*  
 Violle, J. Observations actinométriques pendant l'éclipse du 28 mai, 1900. P. 1658.  
*La Nature. Paris. 28me Année.*  
 Plumondon, J. R. La pluie à Nice. P. 75.  
*Technology Quarterly. Boston. V. 13.*  
 Rotch, A. L. Use of Kites to obtain Meteorological Observations. P. 89.  
*Das Wetter. Berlin. 17 Jahrg.*  
 Muttrich, —. Ueber die Einrichtung von meteorologischen Stationen zur Erforschung der Einwirkung des Waldes auf das Klima. P. 121.  
 Pernter, J. M. Wetterschiessen. P. 134.  
*Scientific American Supplement. New York. Vol. 50.*  
 McAdie, A. G. Frost Fighting. P. 20512.  
*Geographical Journal. London. Vol. 16.*  
 Arctowski, H. Observations on the Aurora Australis. P. 92.  
*L'Aerophile. Paris. 8me Année.*  
 Vincent, J. L'emploi des cerfs-volants en météorologie. P. 63.  
*Philosophical Magazine. London. Vol. 50.*  
 Wood, R. W. Photography of Sound-Waves, and the Kinematographic Demonstration of the Evolutions of Reflected Wave-Fronts. P. 148.  
*Gaea. Leipzig. 36 Jahrg.*  
 Klein, H. J. Wetterprognosen auf mehrere Tage und die täglichen Wetterkarten. P. 475.  
*Comptes Rendus. Paris. Tome 131.*  
 Gautier, A. Gaz combustibles de l'air; air des bois; air des hautes montagnes. P. 13.  
 Gautier, A. Gaz combustibles de l'air; air de la mer. Existence de l'hydrogène libre dans l'atmosphère terrestre. P. 86.  
 Poncare, A. Combinaison des effets des révolutions synodique et tropique; son action sur la marche des dépressions. P. 132.